UNITED STATES PATENT AND TRADEMARK OFFICE

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ART UNIT	PAPER NUMBER
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

    A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *26 July 2007*.

2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,3-9,13 and 15-28* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,3-9,13 and 15-28* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *19 September 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

        1.☐ Certified copies of the priority documents have been received.

        2.☐ Certified copies of the priority documents have been received in Application No. _____.

        3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.

5) ☐ Notice of Informal Patent Application

6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1.   In response to the office action from 4/30/2007, the applicant has submitted an amendment, filed 7/26/2007, amending independent claims 1, 15, and 22, while arguing to traverse the art rejection based on the limitation regarding disambiguation of a multi-sentence expression *(Amendment, Page 11)* and disambiguation using group-specific expressions *(Amendment, Page 11).* Applicant's arguments have been fully considered, however the previous rejection is maintained, altered only with respect to the amended claims and due to the reasons listed below in the response to arguments.

2.   In response to the amendments to the specification, the examiner has withdrawn the previous objection directed to minor informalities.

3.   In response to the amendment of claims 4 and 16, the examiner has withdrawn the previous objection directed to minor informalities.

Response to Arguments

4.   Applicant's arguments have been fully considered but they are not persuasive for the following reasons:

With respect to **Claim 1**, the applicant argues that King et al (U.S. Patent: 5,953,541)

fails to teach disambiguation and completion of a multi-sentence expression because the

teachings of King are directed to word expressions *(Amendment, Page 11)*. In response, the

examiner notes that although the size of the data set utilized by King is different, the concept of

disambiguation and completion of a user text input is the same. Overall, King teaches the ability

to process a partial input, disambiguate the partial text input, and complete the partial text input

(Col. 9, Lines 63-65; Col. 11, Line 40- Col. 12, Line 4, and Col. 18, Lines 45-65). King also

discloses disambiguating a logical extension of single words in the form of multi-word phrases

(Col. 13, Lines 30-60). Although it would have been obvious to one of ordinary skill in the art to

further extend the concepts taught by King to larger word groups such as sentences as multi-

sentences to further conserve user typing time because King already makes the connection

between single and multi-word expressions, King does not explicitly point out this further

extension of his concept. The added limitation of claim 1, however, comprises part of previous

claim 13 and was noted as being taught by Kraft et al *(U.S. Patent: 7,149,550)* in the previous

Office Action *(Page 6)*.

Kraft teaches message completion in a short messaging service (SMS) using a typical cell

phone numeric keypad *(Fig. 1, Element 7)*. In Kraft, a sentence can be auto-completed based on

a partial sentence input by a user *(Col. 8, Line 45-Col. 9, Line 45)*. Kraft further extends this

concept to entire message *templates* that can be derived from complete messages in a user's

inbox/outbox *(Col. 8, Line 55- Col. 9, Line 8)*. SMS Text messages include "special signs",

otherwise known as punctuation *(including periods for sentence demarcation)*, inserted using the

"1" key *(Col. 4, Lines 25-38)* and are up to 160 characters in length, which is enough space for

several sentences *(Col. 6, Line 56- Col. 7, Line 10)*. Thus, since the SMS messages include

punctuation entered using the "1" key, specifically periods for sentence demarcation, and the

auto-completion feature further extends sentences to entire message templates that can be taken

from examples in a user inbox/outbox, Kraft teaches the disambiguation and completion of

multi-sentence expressions and provides the benefit of optimized text completion that saves a

user further typing time *(Col. 8, Lines 46-54)* without requiring a lot of memory *(Col. 9, Lines 4-8)*.

Applicant's arguments *(i.e., Kraft does not teach followed by a recitation of the claim language)* fail to comply with 37 CFR 1.111(b) because they amount to a general allegation that

the claims define a patentable invention without specifically pointing out how the language of

the claims patentably distinguishes them from the references. As pointed out above, however,

Kraft does teach the capability of auto-completion of a multi-sentence expression.

With respect to **Claims 15 and 22**, the applicant argues that King fails to teach group-

specific graphic symbolic expressions "that are more commonly used by members of the group

than by members of the general population" because King teaches custom vocabularies directed

only to a user and their commonly used words *(Amendment, Pages 11-12)*. In response, the

examiner notes that King does teach group-specific vocabulary modules in Col. 35, Lines 30-39.

Here, King notes group-specific vocabularies related to legal terms, medical terms, and foreign

language terms. These terms would only respectively be in common use with people in law

fields, medical fields, and from a particular country or region and not by members of the more

general public. Thus, King discloses this added claim limitation.

The art rejections of the dependent claims are traversed for reasons similar to claims 1,

15, and 22. In regards to such arguments, see the response directed towards claims 1, 15, and 22.

Claim Rejections - 35 USC § 102

5.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the

basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6.   **Claims 15-18 and 21-27** are rejected under 35 U.S.C. 102(b) as being anticipated by

King et al *(U.S. Patent: 5,953,541)*.

With respect to **Claims 15 and 22**, King discloses a method and system for

disambiguating a user's text input (i.e., graphic symbol expressions) utilizing a plurality of

preidentified expressions stored in a vocabulary module *(Col. 10, Lines 5-33)*. These

expressions include of a plurality of characters *(letter or number sequences, Col. 13, Lines 30-

60)* and a combination of characters and spaces that separate characters *(phrases containing

letters and spaces between words, Col. 13, Lines 30-60)*. The method and system taught by King

is also capable of receiving a user input that corresponds to a word stem *(i.e., portion)* of a full

expression *(receiving an input corresponding to a word stem, Col. 11, Line 40- Col. 12, Line 4)*.

This word stem is then used to identify and select an intended input expression *(identification

using a word stem, Col. 11, Line 40- Col. 12, Line 4; and selecting the top choice as the intended

text entry, Col. 9, Lines 63-65)*. Also, King further discloses group-specific vocabulary modules

in the form of legal terms, medical terms, and foreign language terms *(Col. 35, Lines 30-39)*.

These terms would only respectively be in common use with people in law fields, medical fields,

and from a particular country or region and not by members of the more general public.

With respect to **Claim 16**, King discloses that characters are selected from the group at

least consisting of linguistic elements (letters) and non-linguistic elements (numbers) *(Col.*

13,Lines 30-60); and

King discloses that linguistic elements are selected from the group at least consisting of

letters *(Col. 13, Lines 30-60)*, ideograms *(kana and kanji, Col. 33, Line 63- Col. 34, Line 58)*,

and punctuation marks *(apostrophe, Col. 16, Lines 14-32; and accent marks, Col. 22, Lines 3-*

29).

With respect to **Claims 17-18**, King discloses disambiguation of a phrase that comprises

multiple words and represents a sentence portion *(Col. 13, Lines 30-60)*.

With respect to **Claim 21**, King discloses disambiguation of a phrase that comprises

multiple words and represents a sentence portion *(Col. 13, Lines 30-60)* and King discloses the

linguistic elements applied to claim 16.

With respect to **Claim 23**, King shows a keypad having a plurality of characters

assigned to a single key *(Fig. 1A)*.

With respect to **Claim 24**, King discloses a telephone keypad *(Col. 28, Lines 48-51)*,

which can correspond to a cellular phone keypad *(Col. 1, Lines 41-45)*.

With respect to **Claim 25**, King discloses the display of Fig. 1A.

With respect to **Claim 26**, King discloses word stem-based disambiguation and the

group-specific vocabulary modules as applied to Claims 15 and 22.

With respect to **Claim 27**, King discloses an internal device memory *(Col. 9, Lines 26-47)*.

Claim Rejections - 35 USC § 103

7.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

8.   **Claims 1, 3-9, 13, and 19-20** are rejected under 35 U.S.C. 103(a) as being unpatentable over King et al *(U.S. Patent: 5,953,541)* in view of Kraft et al *(U.S. Patent: 7,149,550)*.

With respect to **Claim 1**, King discloses a method and system for disambiguating a user's text input (i.e., graphic symbol expressions) utilizing a plurality of preidentified expressions stored in a vocabulary module *(Col. 10, Lines 5-33)*. These expressions include of a plurality of characters *(letter or number sequences, Col. 13, Lines 30-60)* and a combination of characters and spaces that separate characters *(phrases containing letters and spaces between words, Col. 13, Lines 30-60)*. The method and system taught by King is also capable of receiving a user input that corresponds to a word stem *(i.e., portion)* of a full expression *(receiving an input corresponding to a word stem, Col. 11, Line 40- Col. 12, Line 4)*. This word stem is then used to identify and select an intended input expression *(identification using a word stem, Col. 11, Line 40- Col. 12, Line 4; and selecting the top choice as the intended text entry, Col. 9, Lines 63-65)*.

King does not specifically suggest multi-sentence-level disambiguation, however Kraft discloses a method for completing an entire message template following a user text input *(Col. 8, Line 55- Col. 9, Line 3)*.

King and Kraft are analogous art because they are from a similar field of endeavor in text disambiguation. Thus, it would have been obvious to a person of ordinary skill in the art, at the time of invention, to modify the teachings of King with the multi-sentence completion means taught by Kraft in order to implement optimized word completion for an individual, which does not require a great deal of memory *(Kraft, Col. 9, Lines 4-18)*.

With respect to **Claim 3**, King discloses that characters are selected from the group at least consisting of linguistic elements (letters) and non-linguistic elements (numbers) *(Col. 13,Lines 30-60)*.

With respect to **Claim 4**, King discloses that linguistic elements are selected from the group at least consisting of letters *(Col. 13, Lines 30-60)*, ideograms *(kana and kanji, Col. 33, Line 63- Col. 34, Line 58)*, and punctuation marks *(apostrophe, Col. 16, Lines 14-32; and accent marks, Col. 22, Lines 3-29)*.

With respect to **Claim 5**, King discloses generic vocabulary modules *(Col. 13, Lines 30-60)*.

With respect to **Claim 6**, King discloses custom vocabularies *(Col. 26, Lines 4-49)*.

With respect to **Claim 7**, King discloses the generic and custom vocabularies as respectively applied to Claims 5 and 6.

With respect to **Claim 8**, King discloses a reduced keyboard *(Col. 8, Lines 45-63)*.

With respect to **Claim 9**, King discloses a keyboard in the form of a touchscreen *(i.e.,*

soft) keyboard or a mechanical keyboard *(Col. 8, Lines 45-63)*.

With respect to **Claim 13**, Kraft further discloses completing an entire message template following a user text input, which would inherently include multiple words *(Col. 8, Line 55- Col. 9, Line 3)*.

With respect to **Claim 19**, King discloses the method for text disambiguation as applied to claims 15 and 22, but does not specifically suggest sentence-level disambiguation, however Kraft discloses a method for sentence completion *(Col. 8, Line 45- Col. 9, Line 45)*.

King and Kraft are analogous art because they are from a similar field of endeavor in text disambiguation. Thus, it would have been obvious to a person of ordinary skill in the art, at the time of invention, to modify the teachings of King with the sentence completion means taught by Kraft in order to implement optimized word completion for an individual, which does not require a great deal of memory *(Kraft, Col. 9, Lines 4-18)*.

With respect to **Claim 20**, Kraft further discloses completing an entire message template following a user text input *(Col. 8, Line 55- Col. 9, Line 3)*.

9.   **Claim 28** is rejected under 35 U.S.C. 103(a) as being unpatentable over King et al *(U.S. Patent: 5,953,541)* in view of in view of Will *(U.S. Patent: 6,392,640)*.

With respect to **Claim 28**, King discloses the system for text disambiguation as applied to claim 22, but does not does not specifically suggest a remotely disposed memory, however Will discloses a text disambiguation system featuring a remote server memory *(Col. 3, Lines 6-16)*.

King and Will are analogous art because they are from a similar field of endeavor in text

disambiguation. Thus, it would have been obvious to a person of ordinary skill in the art, at the

time of invention, to modify the teachings of King with the remote server memory taught by Will

in order to minimize memory requirements of a wireless communication device *(Will, Col. 3,*

Lines 6-16).

/

Conclusion

10.   **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time

policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within TWO

MONTHS of the mailing date of this final action and the advisory action is not mailed until after

the end of the THREE-MONTH shortened statutory period, then the shortened statutory period

will expire on the date the advisory action is mailed, and any extension fee pursuant to 37

CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

however, will the statutory period for reply expire later than SIX MONTHS from the mailing

date of this final action.

11.   The prior art made of record and not relied upon is considered pertinent to applicant's

disclosure:

Dance et al *(U.S. Patent: 6,766,069)*- discloses auto-completion of a text input, wherein text corresponds to a paragraph *(i.e., multi-sentence expression) (see abstract)*.

Robinson et al *(U.S. Patent: 6,801,190)*- discloses specialized vocabulary modules for text disambiguation including legal and medical terms *(i.e., group-specific expressions)*.

12.   Any inquiry concerning this communication or earlier communications from the examiner should be directed to James S. Wozniak whose telephone number is (571) 272-7632. The examiner can normally be reached on M-Th, 7:30-5:00, F, 7:30-4, Off Alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Edouard can be reached at (571) 272-7603. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

James S. Wozniak
9/5/2007

PATRICK N. EDOUARD
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